

REMARKS

Claims 1-25 were pending. In the Office Action dated November 10, 2003, claims 1-11, 14-16 and 20-25 were rejected and claims 12, 13 and 17-19 were objected to. By this Amendment, new claims 26-29 are added. Claims 26-29 are supported at least by the original claims and the specification at page 15, lines 22-23; page 17, lines 1-8; and page 19, line 31 to page 20, line 2. Reconsideration and allowance of the present application based on the following remarks are respectfully requested.

(1)

Claims 1-7, 10, 14, 16 and 20-22 were rejected under 35 U.S.C. 102 (b) as being anticipated by US Patent No. 4, 673, 609 to Hill ("Hill"). Applicants respectfully traverse this rejection on the following grounds. Independent claims 1 and 22 each recite, among other limitations, that "at least one of said at least two layers of marking material is applied to said substrate with a surface thereof directly in contact with said imaging surface of said substrate." Hill discloses a method (h), whereby the pattern is "adhered to the substrate" using an "[a]dhesive" (Hill, col. 10, lines 8-15). This adhesive forms an intermediate layer between the substrate and the two layers of marking material disclosed in Hill, which prevents the two layers from being "directly in contact with said imaging surface," as is recited in independent claims 1 and 22. Hill provides no suggestion of omitting the adhesive disposed between the substrate and the marking material. Hill does not, therefore, anticipate or render obvious independent claims 1 and 22. Dependent claims 2-7, 10, 14, 16, and 20-21 depend from allowable claim 1, and are themselves allowable for at least this reason. Applicants therefore respectfully request that the anticipation rejection of these claims be withdrawn.

The Examiner relies on Hill in view of US Patent No. 4,321,778 to Whitehead ("Whitehead") to reject various dependent claims as obvious. Applicants submit that Hill and Whitehead may not properly be combined because one of ordinary skill in the art would have absolutely no motivation or suggestion to do so, and even if there was such a motivation, one of ordinary skill in the art would not have reasonably expected to be able to successfully combine the teachings of Hill and Whitehead. *See* MPEP § 2142 and 2143.

First, Hill and Whitehead relate to mutually incompatible techniques for applying marking material to a substrate. Hill discloses a "kiss die cut" method of removing unwanted ink only in conjunction with a continuous film material (Hill, col. 9, line 68 to col. 10, line 8). The unwanted film material and any adhered ink can be removed from the carrier paper

because of the release afforded by the “relatively medium tack” adhesive layer formed between the film layer and the carrier. Conversely, Whitehead discloses a lacquer carrier layer onto which ink dots are selectively applied (Whitehead, col. 2, line 50 to col. 3, line 13). The ink dots are firmly adhered to the lacquer carrier layer in Whitehead and this adhesion is only eliminated when the lacquer is “burnt off” (Whitehead, col. 3, line 11).

Whitehead’s reliance on a thin lacquer to which the ink is directly adhered without an intermediate adhesive layer is incompatible with Hill’s kiss die cutting technique. Kiss die cutting is a low tolerance process in which the cutting blades completely penetrate the film marking material and additionally penetrate the underlying adhesive layer, to varying extents. Hill utilizes a relatively medium tack adhesive layer between the film marking material layer and the carrier that allows the kiss die blade(s) to cut through the film layer(s) and into the medium tack adhesive layer to varying extents without separating discrete portions of the marking material from the carrier, which remains substantially uncut. Conversely, a lacquer layer as used in Whitehead would be too thin and non-resilient to be kiss die cut in an effective manner. This is because a kiss die cutter would impermissibly cut through the entire thin lacquer layer, leaving the discrete ink dots totally disconnected from each other and unable to be positioned on the substrate according to the teachings of Whitehead (column 2, lines 66 and 67).

Second, a lacquer layer such as that disclosed in Whitehead would prevent Hill’s kiss die cutting technique from working. Specifically, Whitehead’s ink is directly adhered to the lacquer layer, which would prohibit the selective removal (or weeding) of portions of the marking layer, as required by the kiss die cutting method disclosed in Hill. In fact, the lacquer layer must be “burnt off.” *See* Whitehead, col. 3, line 11.

Third, Hill’s kiss die cutting method cannot be used on ceramic ink like that utilized in Whitehead. Hill’s kiss die cutting method utilizes “film material” (Hill, col. 10, line 6), which can be cut and manually “weeded” away from the surrounding film material. Whitehead, on the other hand, utilizes ink dots that must be burnt into the glass substrate. *See* Whitehead, col. 3, line 11. One of ordinary skill in the art would know that ceramic ink like that used in Whitehead comprises a malleable, viscous resin that is only partially cured, and has a consistency somewhat akin to refrigerated butter, until the ceramic ink is fired in a furnace. One of ordinary skill in the art would not have reasonably expected to be able to selectively remove such a malleable layer of ceramic ink using the kiss die cutting technique disclosed in Hill.

Consequently, one of ordinary skill in the art would have no motivation to combine the teachings of these mutually incompatible techniques. Nor would one of ordinary skill have a reasonable expectation of success in doing so. Hill and Whitehead may not, therefore, be properly be combined to render claim 1 obvious.

(2)

Claim 15 was rejected under 35 U.S.C. 103 (a) as being unpatentable over Hill in view of Whitehead. Applicants respectfully traverse this rejection for the following reasons.

First, claim 15 recites, among other limitations, a “primary surface” of a base layer, which “comprises a plurality of materials.” Whitehead discloses a decal carrier comprising a series of uniform layers of different materials (lacquer and carrier paper) but does not disclose or suggest a surface comprising a plurality of materials, as recited in claim 15. As the Examiner acknowledges, Hill does not disclose that “the primary surface of the base layer comprises a plurality of materials.” *See* 11/10/03 Office Action at 5. Accordingly, because even the combination of Hill and Whitehead does not disclose or suggest a primary surface of a base layer, which “comprises a plurality of materials” as recited in claim 15, the combination would not result in the invention recited in claim 15.

Second, as discussed above with respect to claim 1, it is not obvious to combine the teachings of Hill and Whitehead.

For these reasons, Applicants respectfully request the withdrawal of the obviousness rejection of claim 15.

(3)

Claim 24 was rejected under 35 U.S.C. 103(a) as being unpatentable over Hill in view of Whitehead. Applicants respectfully traverse this rejection for the following reasons.

Claim 24 recites, among other limitations, “applying a base layer to said imaging surface of said substrate, applying at least two initial, continuous, superimposed layers of said marking material onto said base layer, ... wherein said base layer is removed from said substrate by being burnt off in a glass tempering regime leaving at least one of said at least two layers of marking material applied to said substrate with a surface thereof directly in contact with said imaging surface of said substrate.” During the process, the recited base layer is disposed between the marking layers and the substrate. Hill and Whitehead, on the other hand, each disclose a base or carrier layer that is disposed on an opposite side of the marking layers from the substrate. *See* Whitehead, col. 2, lines 54-63; Hill, col. 9, line 67 to col. 10, line 15.

Neither reference nor their combination discloses or suggests that the base layer be disposed between the at least two layers of marking material and the substrate, as recited in claim 24.

Second, as discussed above with respect to claim 1, it would not have been obvious to one of ordinary skill in the art to combine the teachings of Hill and Whitehead.

For these reasons, Applicants respectfully request the withdrawal of the obviousness rejection of claim 24.

(4)

Claims 1, 8, 9 and 11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Whitehead in view of US Patent No. 1, 199, 882 to Frey ("Frey"). Applicants respectfully traverse this rejection for the following reasons.

First, one of ordinary skill in the art would not have reasonably expected to successfully combine Frey's material removal teachings with Whitehead's pattern printing technique. *See* MPEP § 2142 and 2143. Frey is directed toward amending the normal method of silvering glass to form a mirror, by removing part of the silvering and its backing to form a one-way mirror by means of "graving" or "etching" techniques. *See* Frey, col. 1, lines 11-25. "Etching" does not comprise "a force selectively applied." As discussed above, Whitehead utilizes a lacquer layer to which discrete ink dots are firmly adhered until the lacquer is burnt off. *See* Whitehead, col. 3, line 11. If one of ordinary skill in the art applied at least two initial, continuous, superimposed layers of marking material onto the lacquer layer disclosed in Whitehead, the marking material could not subsequently be removed in an effective manner using Frey's "graving" techniques. *See* Frey, col. 1, lines 13-14. One of ordinary skill in the art would have understood that Frey's material removal teachings could not be combined with Whitehead's technique because the "graving" tools would damage and typically break up the fragile "coat of clear lacquer," which supports Whiteheads' ink dots in their respective positions once the paper carrier is removed. *See* Whitehead column 2, lines 50 to 67. Even before the paper carrier is removed, Whitehead's paper carrier is flexible, flimsy, and does not offer good resistance to mechanical removal of unwanted ink.

Further, Frey discloses the use of graving or etching to remove a part of the silvering. *See* Frey, col. 1, lines 3-5. Whitehead utilizes ink dots that must be burnt into the glass substrate. *See* Whitehead, col. 3, line 11. One of ordinary skill in the art would know that ceramic ink like that used in Whitehead comprises a malleable, viscous resin that is not hardened or cured until the ceramic ink is fired in a furnace. Accordingly, one of ordinary skill in the art would not have reasonably expected to be able to selectively remove such a

malleable layer of ceramic ink using the graving techniques disclosed in Frey. Conventional engraving tools would typically become “clogged up” by the deformable ceramic ink of Whitehead; they would not remove all of the unwanted ceramic ink, at least some of which would deform and move into different, yet equally undesirable, positions.

The Examiner’s combination of Whitehead and Frey would therefore not have been obvious because one of ordinary skill in the art would not have reasonably expected to be able to successfully combine their teachings.

Second, it would not have been obvious to combine Frey’s teachings with Whitehead’s because Whitehead’s heat-based printing technique would destroy the efficacy of Frey’s silvered mirror teaching. The tempering process required by Whitehead to burn off the lacquer and burn in the ink dots (Whitehead, col. 3, lines 10-11) would damage or destroy conventional silvering material and release dangerous gases. One of ordinary skill in the art would have produced silvered, tempered glass by silvering already tempered glass.

With regard to claim 11, the Frey term “graving” should be distinguished from the applicant’s term “scraping”. Viscous materials can be effectively scraped away but hard, tough materials cannot be effectively scraped away.

For these reasons, it would not have been obvious to one of ordinary skill in the art to combine the teachings of Frey and Whitehead. Applicants therefore respectfully request the withdrawal of the obviousness rejections of claims 1, 8, 9 and 11.

(5)

Claim 25 was rejected under 35 U.S.C. 103 (a) as being unpatentable over the references as combined in section (4), above, in further view of Hill. Applicants respectfully traverse this rejection.

First, as discussed above in section (4), it would not have been obvious to one of ordinary skill in the art to combine the teachings of Frey and Whitehead.

Second, as discussed above in section (1), it would not have been obvious to combine the teachings of Hill and Whitehead.

Third, the “kiss die cut” method of cutting and removing film material disclosed in Hill cannot be used with either Whitehead’s or Frey’s teachings because neither Whitehead nor Frey provide a medium tack release layer that allows portions of the continuous layer to be weeded away from the release layer. Frey’s silvered layer is firmly adhered to the glass substrate and must be graved or etched away. Whitehead’s ink is firmly adhered to the

lacquer layer and the lacquer layer does not release until it is burned away. Accordingly, one of ordinary skill in the art would not have had a reasonable expectation of being able to successfully remove a marking layer using Hill's kiss die cutting method and Whitehead's or Frey's printing technique.

For these reasons, it would not have been obvious to one of ordinary skill in the art to combine the teachings of Hill with the teachings of Frey and Whitehead. Applicants therefore respectfully request the withdrawal of the obviousness rejections of claim 25.

(6)

Claim 23 was rejected under 35 U.S.C. 103 (a) as being unpatentable over Hill in view of Frey. Applicants respectfully traverse this rejection. Claim 23 recites, among other limitations, "transferring said at least two initial, continuous, superimposed layers of said marking material to said substrate by means of a force selectively applied to said marking material while said marking material is being supported by said base layer." Neither Hill nor Frey nor disclose or suggest this limitation. Applicants therefore respectfully request the withdrawal of the obviousness rejection of claim 23.

(7)

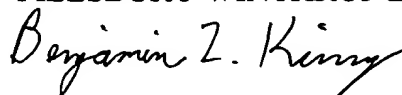
On August 11, 2003, Applicants filed an Information Disclosure Statement with two PTO-1449 pages. The Examiner signed and returned only the first of these two pages with the November 10, 2003 Office Action. Applicants request that the Examiner sign and return the second page of references, a copy of which is attached hereto for the Examiner's reference.

All objections and rejections having been addressed, it is respectfully submitted that all claims 1-27 of the present application are in a condition for allowance and a Notice to that effect is earnestly solicited.

HILL ET AL. -- 09/890,570  
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Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,  
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Attachment: Second page of PTO-1449, as filed on August 11, 2003